



**P-F FLUSH SELF CLINCHING NUTS** have been designed to provide a thread within the sheet thickness giving a flush finish to both sides.

A simple squeezing action embeds the hexagonal head into the sheet and the displaced metal flows evenly around the undercut shank securely locking it into place.



## DESIGN GUIDE

### HOLE SIZE

Holes must be held to a tolerance of  $-.000'' +.003''$   
( $-0.00\text{mm} +0.08\text{mm}$ )

Therefore punched holes are recommended  
Holes must not be de-burred or chamfered

### INSTALLATION

Must always be carried out using a squeeze action - NEVER a shock load

### SHEET HARDNESS

Must be less than 70RB (128VPN)

### SHEET THICKNESS

See dimensions table

### SHANK NUMBER

Always use the longest shank possible for the sheet thickness.

This will optimize the stripping strength and resistance to side loads.

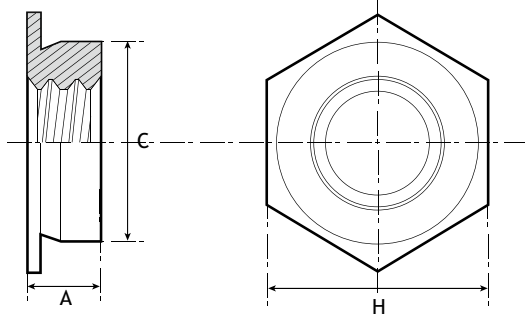
### DIRECTION OF LOAD

P-F fasteners should always be loaded from the pilot end See maximum screw tightening torque to prevent over loading of head or thread.

## ADVANTAGES

- ALLOWS CAPTIVE NUTS TO BE USED IN PANELS WHERE LACK OF SPACE PREVENTS THE USE OF CONVENTIONAL CAPTIVE FASTENERS
- EASILY ASSEMBLED INTO ROUND HOLES
- HIGH PULL OUT
- HIGH TORQUE RESISTANCE
- PROVIDES FLUSH FINISH TO BOTH SIDES OF THE SHEET

## TECHNICAL DATA



## MATERIAL CODES

P-F - Stainless Steel

## MAXIMUM SHEET HARDNESS

P-F = Rb 70



## P-F TYPE (METRIC)

## METRIC

All dimensions in millimeters

THREAD SIZE / CODE	Shank Code	For Min Sheet Thickness	A (max)	Hole Size in Sheet +0.08 -0.00	Diameter of Shank C (max)	H A/F Nominal	Minimum distance centre line hole to sheet edge
M2	1	1.50 - 2.3	1.50	4.37	4.35	4.80	6.0
	2	≥ 2.32	2.30				
M2.5	1	1.50 - 2.3	1.50	4.37	4.35	4.80	6.0
	2	≥ 2.32	2.30				
M3	1	1.50 - 2.3	1.50	4.37	4.35	4.80	6.0
	2	≥ 2.32	2.30				
M4	1	1.50 - 2.3	1.50	7.37	7.35	7.90	7.2
	2	≥ 2.32	2.30				
M5	1	1.50 - 2.3	1.50	7.92	7.90	8.70	8.0
	2	≥ 2.32	2.30				
M6	3	3.1 - 3.85	3.05	8.74	8.72	9.50	8.8
	4	3.9 - 4.63	3.84				
	5	≥ 4.65	4.63				

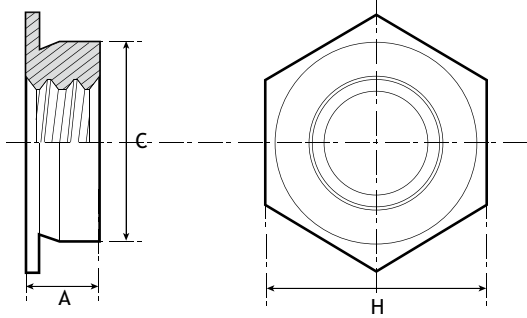
## HOW TO SPECIFY

### P-F (Stainless Steel Standard Sizes)

Product Code	P-F-M4-1
Thread Code	P-F-M4-1
Shank Code	P-F-M4-1

## TECHNICAL DATA

## P-F TYPE (UNIFIED)



### MATERIAL CODE

P-F - Stainless Steel)

### MAXIMUM SHEET HARDNESS

P-F = Rb70



## UNIFIED

All dimensions in inches

THREAD SIZE / CODE	Shank Code	For Min Sheet Thickness	A (max)	Hole Size in Sheet +.003 -.000	Diameter of Shank C (max)	H A/F Nominal	Minimum distance centre line hole to sheet edge
256	1	.060 -.090	.060	.172	.171	.188	.230
	2	≥.091	.090				
440	1	.060 -.090	.060	.172	.171	.188	.230
	2	≥.091	.090				
632	1	.060 -.090	.060	.213	.212	.250	.270
	2	≥.091	.090				
832	1	.060 -.090	.060	.290	.289	.312	.280
	2	≥.091	.090				
032 / 024	1	.060 -.090	.060	.312	.311	.343	.310
	2	≥.091	.090				
0420 / 0428	3	.125 -.155	.120	.344	.343	.375	.340
	4	.156 -.186	.151				
	5	≥.187	.182				

## HOW TO SPECIFY

### P-F (Stainless Steel Standard Sizes)

Product Code	P-F-832-1
Thread Code	P-F-832-1
Shank Code	P-F-832-1

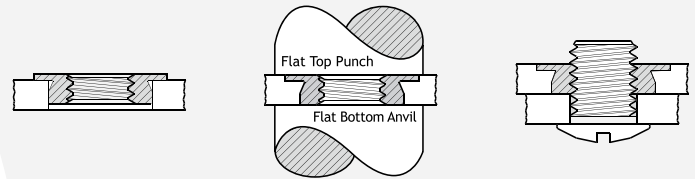


P-F SELF CLINCHING NUTS are easy to install because no special tooling is necessary. However, it is very important to note they must always be installed by a squeeze action press rather than a hammer blow.

Punched holes are always recommended.

## METHOD OF ASSEMBLY

1. Punch a hole in the metal sheet to the size recommended in our technical data table. De-burring of the hole is not recommended.
2. Insert the shank of the fastener into the hole.
3. Apply squeezing pressure sufficient to embed hexagonal head flush in sheet.



## PERFORMANCE DATA (METRIC)

Thread Code	Shank Code	Max. Tightening Torque for Mating Screw (Nm)	Test Sheet Material			
			Cold Rolled Steel		5052-H34 Aluminum	
			Installation (kN)	Pushout (N)	Installation (kN)	Pushout (N)
M2	1	0.20	15	1000	10	850
	2					
M2.5	1	0.25	15	1000	10	850
	2					
M3	1	0.35	15	1000	10	850
	2					
M3.5	1	0.40	17	1200	12	1000
	2					
M4	1	0.60	19	1450	13	1200
	2					
M5	1	1.00	20	1600	14	1300
	2					
M6	3	3.90	22	2800	17	2000
	4					
	5					

## PERFORMANCE DATA (UNIFIED)

Thread Code	Shank Code	Max. Tightening Torque for Mating Screw (in/lbs)	Test Sheet Material			
			Cold Rolled Steel		5052-H34 Aluminum	
			Installation (lbs)	Pushout (lbs)	Installation (lbs)	Pushout (lbs)
256	1	1.8	3300	220	2200	190
	2					
440	1	3.0	3300	200	2200	190
	2					
632	1	3.7	3800	270	2400	220
	2					
832	1	5.5	4200	325	2600	270
	2					
032 / 024	1	8.0	4500	360	2800	290
	2					
0420 / 0428	3	40	4900	630	3500	450
	4					
	5					

Note: The above values are averages when correct installation is performed. Variations in holes size, material and installation will affect these results. For specific advice we strongly recommend consultation with your PSM Technology Centre.